

pressure within the ducts checked secretion into the normal channels. Yet, when the material for bile formation is provided in unusual quantity, by injecting hemolytic serum intravenously, a parenchyma deprived of portal blood can secrete bile into the ligated duct under considerable pressure. Intralobular stasis, and its corollary intralobular cirrhosis, can be brought about in the liver of rabbits by diverting the whole portal stream and ligating the efferent duct. When the duct from the main liver is also tied, the secretory activities of the lobe become strikingly evident, the lobules showing intense bile staining and intralobular cirrhosis developed rapidly without necrosis, as the increased portal flow provides a circulation to cells that otherwise would have been deprived of it. The authors conclude that the principles illustrated in their experiments may be applied to the biliary lesions of man, though the picture in man is varied by the fact that human bile is relatively non-irritant, that infection occurs more frequently in areas of stasis, and the liver parenchyma responds but slowly to deranged circulatory conditions. It is the belief of the authors that the diversity of the liver changes in man depend upon the duct levels at which the injurious agent is active, and that bile stasis may complicate any chronic liver derangement in which the bile passages are compromised.

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**A Rapid Method of Pneumococcus Typing.**—Because of its value in prognosis and for specific serum therapy several methods for the determination of pneumococcus types have been devised. OLIVER (*Jour. Infect. Dis.*, 1920, xxvii, 310) employs a procedure based on the solubility of the pneumococcus in bile. The relative number of pneumococci is determined by a direct smear of the sputum stained by Gram's method. To one and one-half c.c. of sputum is added a sufficient quantity of normal salt solution to insure a homogeneous specimen which can be filtered or centrifugalized and the mixture is thoroughly stirred with a glass rod. From 3 to 5 drops of undiluted ox bile are then mixed with the diluted sputum, which is then heated to 45 to 48° for ten to twenty minutes in a water-bath. The fluid is then filtered or centrifugalized. Of the filtrate or centrifugate, 0.3 to 0.5 c.c. are pipetted into each of three small tubes. To the first tube is added one drop of undiluted type one pneumococcus antiserum, to the second, one drop of type two antiserum and to the third tube an equal quantity of type three antiserum. A positive precipitin test consist of a clouding which is enhanced by heating to 40° C. for ten to twenty minutes. If then placed in the ice-box for several hours the positive tube will show sedimentation. The method was used on 25 cases. In all of those where a positive precipitin test for one of the first three types of pneumococci was obtained, the results were identical with those obtained by the Avery method. In the 15 cases in which the rapid precipitin test was negative, the Avery method revealed a type four pneumococcus in 11 and streptococcus in 4. Of these 15 cases, intraperitoneal inoculation of mice with washed sputum was employed in 10, and each time the result was the same as in the Avery method. The author suggests the subsequent use of the mouse on those sputa in which the rapid precipitin test fails to reveal a type.

## HYGIENE AND PUBLIC HEALTH

UNDER THE CHARGE OF

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**Masked Juvenile Tuberculosis.**—COOKE and HEMPELMANN (*Am. Rev. Tuberc.*, November, 1920, iv, 660) believe that masked juvenile tuberculosis presents a sufficiently distinctive clinical type to deserve a prominent place in the category of tuberculous affections in childhood. They state that the characteristic clinical picture may be briefly sketched as follows: a history of frequent coughs and colds, with or without known exposure to tuberculosis, attacks of unexplained fever, often with afternoon elevations, anorexia, loss of weight and asthenia. On physical examination, there is found more or less malnutrition, occasionally anemia, and chest signs referable to enlarged tracheobronchial nodes. In certain instances there may be in addition phlyctenular disease or skin tuberculides. The Pirquet or intracutaneous tuberculin tests are positive, and, in those over four years of age, three-fourths of the children give a positive complement-fixation test for tuberculosis. The chest findings may be verified by the use of the roentgen ray which not infrequently reveals unsuspected lesions of varying size and age in the lung parenchyma as well. The diagnosis must of course rest not in any one of the points mentioned, but rather upon a review of all the findings; and there the authors wish to emphasize the value of the complement-fixation test in calling attention to this class of cases.

**Saliva-borne Infections: Their Transmission through Eating Utensils.**—CUMMING, SPRUIT and REUTER (*Mod. Med.*, July, 1920, No. 7, ii) conclude as follows from their investigations on saliva-borne infections: First and foremost in the control of the saliva-borne infections is a reduction in the transmission rate. This will diminish the large mass of carriers, who are far more important as sources of distribution for this group of infections than the actual cases in the hospital. Further attempts should be made to determine with accuracy the major and minor routes of transmission and the several links in the chain of these routes. The authors conclude from their studies that it appears eating utensils rank foremost as transmitting agents of the saliva-borne infections. These utensils either enter the mouth or touch the lips; they become contaminated with organisms of the oral cavity; they are still contaminated after they are hand washed, and the next user acquires this contamination. The use of utensils contaminated with organisms of one or more of the saliva-borne diseases does not necessarily mean infection, but this major avenue of transmission is so prolific and so